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PRATT, HELEN F	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 20040228

Application Number: 09/853,391
Filing Date: May 11, 2001
Appellant(s): DAKE ET AL.

Carl J. Roof
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1-22-04.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct. To clarify, the rejection as to claim 102 under 35 U.S.C. section 112(2) has been withdrawn.

4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-18, 93-98 and 102 do stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,399,132	Ishida et al.	6-02
2001/0016208	Valentine et al.	8-01
6,056,949	Menzi et al.	5-2000
5,968,580	Chuang et al.	10-1999

5,473,097	Kishimoto et al.	12-1995
6455511	Kampinga et al.	9-2002
3,625,711	Eisenstadt	12-71

AspartameSweetener packet made by Safeway Stores.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

NEW GROUND(S) OF REJECTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2 and 102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. (6,399,132) or Chuang et al. in view of Eisenstadt (3,625,711), Aspartame SWEETNER (Trademark) packet made by Safeway Stores and Kishimoto et al. (5,473,097).

The reference to SWEET'N LOW (Tradename) has been removed since the amounts refered to on the back side of the sweetener packet is not of record. The reference to Eisenstadt is used instead which is the patent to Sweet'n Low.

Ishida et al. disclose a composition containing a high intensity sweetener (HIS) and a bulking agent (col. 4, lines 25-38). The particle size of the acesulfame K (ACE-K) was about 250 microns or less and the particle size of APM (aspartame) was about 500 microns or less (col. 3, lines 53-67). Fibers, sugars and oligosaccharides are considered to be bulking agents because they add bulk, but do not combine with the sweetener. Chuang et al. disclose the use of bulk aspartame (a dipeptide sweetener) and aspartame coated onto acid in powdered drink mixes (abstract). The aspartame particles can be about 150 microns with 80% of the aspartame particles being 150 microns. The lower limit is 60% of the particles being retained on a No. 100 US sieve (opening 150 microns)(col. 2, lines 54-60). Also, Kishimoto et al. further disclose that it is known to make aspartame particles in a size range of 100 to 500 microns by granulation, and particles of aspartame within the preferable range of 150 to 300 microns (col. 2, lines 55-58). Claims 1 and 2 differ from the reference in the particular amount of bulking agent. However, bulking agents act as diluents when used with sweeteners due to the high intensity sweetness of the sweeteners as in Eisenstadt, who discloses from 90-97% bulking agents, which can be dextrose and lactose and 1.5-7% of saccharine (col. 3, lines 10-17). Therefore, it would have been obvious to use the claimed amount of bulking agent as disclosed by Eisenstadt.

Claim 102 requires particular amounts of ingredients, and only the sweetener aspartame, wherein at least about 50% of the aspartame by weight has a particle size of greater than 106 microns, and 96% bulking agent and the food is used as food or beverage. The amount of bulking agent in Eisenstadt as above is less than 95%. The

above references disclose compositions containing the claimed particle size of less than 500 microns, which reads on 106 microns in Ishida et al. as above, and particles of 150 microns in Chuang et al. as above. In any event, a product made by Safeway, "aspartame SWEETENER" Trademark, contains only aspartame and maltodextrin (packet of aspartame SWEETENER). Also, Kishimoto et al. disclose that it is known to make aspartame particles by granulation in sizes from 100 to 500 microns or in a preferable range of 150 to 300 microns (col. 2, lines 55-58). Therefore, it would have been obvious to make a product containing only aspartame and other ingredients, which do not affect the composition, and to use the claimed particle size as shown by the above combined references.

Claims 3-7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the above combined references as applied to claims 1, 2 and 102 above, and further in view of Valentine et al. (US 2001/0016208 A1).

Claim 3 requires the addition of various nutrients such as vitamins and minerals, and claim 4 a flavor agent. Valentine et al. disclose a composition, which can be a particulate food, which contains aspartame and mannitol. The particulate products can contain vitamins and dietary supplements (abstract and paragraph [0038]). The mixture of ingredients contains a flavorant, an agglomerate of mannitol and aspartame, and bulking agents such as sodium bicarbonate (para. [0103]). Vitamins are generally known to encompass the claimed vitamins. Therefore, it would have been obvious to use vitamins and flavors in the claimed composition.

Claim 5 further requires the bulking agent sucrose. Ishida et al. disclose the use of sucrose in the composition (col. 4, lines 25-38). The sucrose is considered to be a bulking agent, which is the same thing as a diluent, or excipient as disclosed in the reference (col. 4, lines 34-36). Therefore, it would have been obvious to use sugar as a bulking agent as disclosed by Ishida et al.

Claim 6 further requires various forms of flavorants. However, nothing new is seen in the various types of flavor agents. Therefore, it would have been obvious to use known types of flavorants in the claimed composition.

Claim 7 further requires particular HIS's which have been disclosed as in claim 1 and are obvious for those reasons.

Claim 13 requires a particular solubility of the composition. As the claimed composition has been shown, it is seen that it would have had the required solubility absent a showing to the contrary. Therefore, it would have been obvious to make a composition with the claimed composition.

Claims 8 –12, 14-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the above combined references as applied to claims 3-7 and 13 (Valentine) and claims 1, 2, and 102 (Ishida et al. (6,399,132) or Chuang et al. in view of Sweet'n Low (Tradename) (patent 3,625,711) to Eisenstadt and Kishimoto et al. (5,473,097), and further in view of Menzi et al.

Claim 8 requires that the total flavor agent also have a particle size greater than about 106 microns. Menzi et al. disclose a granulated flavor agent, which is larger than

106 microns, i. e. is 0.2mm to about 1.5 mm, which can be used in an instant, drink powder (col. 6, lines 45-48 and col. 4, lines 40-45). Therefore, it would have been obvious to use known particle sizes the in composition of the combined references.

Claim 9 further requires various amounts of ingredients. However, as the basic amounts of ingredients has been disclosed as in claim 1, it would have been within the skill of the ordinary worker to vary the amounts of ingredients, especially as the function and sweetness of each ingredient is known. Therefore, it would have been obvious to vary the amounts of ingredients in the claimed composition.

Claim 10 further requires that less than 10% of the HIS have particles of less than 45 microns. Ishida discloses the use of ACE-K, which has a particles size of 250 microns as above. The reference does not state what amount of particles would have been less than 45 microns. It does say that the larger particle size of 250 to 500 microns is required (col. 3, lines 55-70). Therefore, it would not serve any useful function to have small particle sizes of 45 microns. Therefore, it would have been obvious to use larger size particle sizes as disclosed by Ishida.

Claim 11 requires choosing 3 nutrients. It would have been within the skill of the ordinary worker to choose whatever of the known nutrients which would be useful in making a particular composition, especially as Valentine et al. has disclosed that it is known to add vitamins in general. Therefore, it would have been obvious to limit the number of nutrients in the claimed composition.

Claim 12 requires a particular solubility of the composition. As the claimed composition has been shown, it is seen that it would have had the required solubility

absent a showing to the contrary. Therefore, it would have been obvious to make a composition with the claimed composition.

The limitations of claims 14-29 have been discussed above and are obvious for those reasons except for the particular amount of high intensity sweetener having the particle size of greater than 106 microns. However, Ishida et al. disclose the claimed particle sizes as above and does not disclose that any percent of the ACE-K which are of a smaller size. Absent a showing to the contrary, it is seen that Ishida et al. disclose 100% particles within the claimed size as the reference does not contemplate the smaller sizes, except to say "up to", but the sizes then start from 250 to 500 microns. Therefore, it would have been obvious to use larger size crystals than 45 microns.

Claims 30-85, 93-98 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references of the above rejections as applied to the above claims 1-29 and 102 above, and further in view of Kampinga et al. (6,455,511).

Claim 30 further requires the use of minerals with the composition and claim 35 particular minerals and claim 41 iodine, claim 42 ferrous amino acid chelate. Kampinga et al. disclose a composition in a dried form containing vitamins and minerals, which can be made into a beverage containing artificial sweeteners (col. 4, lines 65-68, col. 7, lines 41-51). The further limitations of the claims from 30 to 44 have been discussed above and are obvious for those reasons. Therefore, it would have been obvious to use various minerals in the claimed composition because Kampinga disclose that it is known to use vitamins and minerals in an artificial sweetener containing beverage.

Claim 45 further requires a particular amount of aspartame in the beverage with a particular particle size and claim 57 that 82 % of the aspartame has a particle size of greater than 106 microns. As it is known that aspartame has a particular sweetness intensity and the particle size has been shown above in the use of a different sweetener, it would have been obvious to use other known sweeteners in the claimed size since the various claimed sweeteners have been equated as equal in the Markush groupings. The further limitations have been discussed above and are obvious for those reasons.

Claims 57 to 85 are to the use of aspartame as the sweetener. However, as the various sizes of particles have been disclosed as desirable, it would have been obvious to use the same particle size of sweetener in the claimed composition. The further limitations have been discussed above in regard to a different sweetener and are obvious for those reasons.

Claims 93-98 are to using the composition of the independent claims in a beverage. However, as above Kampinga et al. disclose the use of artificial sweeteners in beverages as does Menzi et al. and Valentine et al (abstract). Therefore, it would have been obvious to use sweeteners for their known functions in beverages.

(11) Response to Argument

Appellants arguments filed 1-22-04 have been fully considered but they are not persuasive.

Appellants argue that Ishida prefers the use of a particle size smaller than that claimed. The reference does disclose this size in solubility tests as in claim I. However,

the reference goes on to cite in Example 2, that the APM powder can be granulated using a pre size of 1,400 microns (col. 5, lines 40-55, col. 6, lines 25-39). Granulation sizes of from under 100 microns to 500 microns and granule sizes of specifically 100 to 500 microns were tested (col. 7, col. 1). Also, particle sizes of less than 500 microns are claimed (col. 8, lines 43-45).

Appellants argue that the reference to Ishida does not disclose their claimed amount of bulking agent. However, no unobvious or unexpected results are seen to result from the use of a particular amount of a bulking agent. It would have been within the skill of the ordinary worker to use whatever amount was required to make the required amount of sweetness in the product. In addition, Eisenstadt discloses the claimed amount.

As to claim 102, the reference to Kishimoto et al. disclose the composition.

Applicants argue that there is no motivation to combine Chuang with Sweet'n Low (Eisenstadt). However, the claims do not say what the bulking agent is, wherein the maltodextrin of Chuang is considered a bulking agent because it serves as a diluent and adds bulk to the composition (col. 3, lines 10-12). SWEET'n LOW (Eisenstadt) also discloses that it is known to dilute saccharine with other ingredients such as dextrose.

In response to appellants' argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, each reference is used to what was taught as cited in the previous office actions. Certainly, appellants have not excluded the other ingredients of the references. The motivation for combining the references was that since high intensity sweeteners were known and used in the claimed amounts and that the particle size of the sweetener was known and that it influences the solubility of the sweetener, and that bulking agents were known and used in the claimed amounts, that it would have been obvious to use such teachings to make a sweetener composition as claimed.

Appellants request clarification as to how the references are combined. Ishida or Chuang are each modified by the additional references.

Appellants argue that the cited references do not teach all the claim elements, i. e. that Ishida teaches a particle size for Ace-K but does not teach one for aspartame. However, in claim 1 the reference is only to a "high intensity sweetener". So even the particle size of Ace-K (acesulfame K) meets the limitations of claims 1 and 2 (col. 3, lines 54-67).

Appellants argue as to the particle size of aspartame in Ishida that the claimed particle size is not taught and discusses the particle sizes in the "best mode' section and concludes that an average particle size of 15 microns is what is taught. However, the very claims of Ishida disclose a particle size of 500 micron or less. Certainly, there is no need to be bound by the teaching of 15 microns, when there is a large difference up

to 500 microns which is claimed (col. 8, lines 43-50). The use of particle sizes from 100-500 microns is shown in Table 2, under "APM alone" where the dissolution rates are given just for APM (aspartame). Appellants argue further as to Ishida that when a bulking agent is included in the composition that a smaller size would become even more important. Nothing is seen to make this conclusion.

Appellant argues that there is no indication that the use of aspartame having a particle size of greater than 106 microns would provide beneficial dispersibility/solubility properties. However, the reference to Ishida et al. disclose that it was known that APM when granulated to a larger particle size has improved solubility (col. 2, lines 42-45) and that the use of the ACE-K even further enhanced its solubility. The particle size is shown in Table 2 in col. 7 and 8 and in the claims. Nothing is claimed by Appellants as to the particle size enhancing the dispersibility and solubility of the sweetener. No teaching away from the use of the claimed particle size is seen because the claimed particle size has been shown.

Appellants argue that Ishida discloses the optional use of a diluent (bulking agent) and no amounts and that the diluent may be used "as long as the improved solubility of APM is not affected and that the tests do not use an excipient and that there is no disclosure of the amount claimed. However, no 102 rejection is applied to the claims and they are used with other references that do show bulking agents. No nexus is seen in the use of a bulking agent and a sweetener in the specification. Nothing is seen that it affects the sweetening characteristics of the sweetener. Bulking agents or diluents are seen to be well known as shown by the secondary references.

Appellants argue that there is no reason to combine the teachings of Sweet'n Low as to amounts of bulking agent with Ishida. However, Ishida indicates that a bulking agent may be used (col. 4, lines 24-37) and Sweet'n Low discloses that it is common to use a bulking agent in the claimed amount. It is know generally that sweeteners are used in amounts that will simulate the taste of sugar (sucrose) and the intensity of sweeteners is compared to sugars (Ishida et al. col. 5, lines 29-40). Therefore, the amount of sweetener is generally limited in a sweetener product and the rest is made up a bulking agent as in Sweet'n Low and Safeway aspartame SWEETENER ™. Also, no nexus is seen between the use of a bulking agent and a sweetener. It is seen that the bulking agent is used only to dilute the amount of sweetener in the composition and is not critical to the use of the sweetener or has any affect on it, except in allowing only enough sweetener to be used so that it will simulate sucrose.

Appellants argue that there is no reason to combine Kishimoto with both Ishida and Sweet'n Low to show the claimed particle size. This is not seen because Kishimoto adds further support for the fact that the particle size is known and that the grain size is important to water solubility (col. 1, lines 10-15, and col. 2, lines 59-70, page 3, lines 1-5). Kishimoto also discloses the lowest particle size of 100 microns necessary to give enhanced water-dispersibility of the sweetener (col. 2, lines 55-77). The reference points out the lower level required for dispersibility and solubility of the sweetener and is combined with Ishida and Chuang to show the lowest level of dispersibility and the highest optimal level.

Appellants argue that Chuang is directed to a tea containing beverage mix containing tea solids and bulk aspartame and aspartame-coated acid and that the reference does not teach the claimed particle size. However, it does teach as to the bulk aspartame that it should pass through openings 150 microns in size. Certainly, this reads on "greater than about 106 microns". (col. 2, lines 54-62). The APM coated acid powder passes through even larger openings (420 microns) (col. 2, lines 64-68 and col. 3, lines 1-6). The further references to Ishida and Kishimoto are combined to show the particle sizes and that it is known to use bulking agents with APM. Further, the rest of the composition could be seen as a bulking agent in Chuang, because the composition contains other granular materials (i. e. bulking materials) such as tea solids with maltodextrin and granular citric acid and these ingredients have not been excluded from the claims.

Appellants argue as to the 103 rejection that hindsight was used, that there is no reason to combine the references. However, the combinations have been discussed above. Appellants argue that none of the references teach using only aspartame and a bulking agent and that the Safeway product made of APM and a bulking agent does not cure the deficiencies and that Kishimoto does not teach the claimed particle size. However, it is seen that the Kishimoto does teach the claimed particle size for the reasons cited above under the discussion of Kishimoto. The claims do not exclude the use of any particular IB crystal form as in Kishimoto or that it is sold in packets.

Appellants argue that there is no discussion of inclusion of a bulking agent or the particle size range of aspartame as in claim 102 in the combined references or to

eliminate the second sweetener in Ishida or Chuang. However, the Safeway APM product distinctly discloses that it is known to use only a bulking agent and APM together. The other references disclose that the particle size is known and can increase the solubility of APM. No reason is seen not to use a more soluble particle size APM as shown by the references to make an aspartame and bulking agent type product. In addition, the high intensity sweetener is the only ingredient limited to aspartame. No criticality is seen that the sweetener be limited to only APM. Appellants' specification is to the particle size of high intensity sweetener's in general. An example is given as to aspartame, but the discussion does not say that the composition should be limited to only aspartame (page 4, paragraphs 4, 5 and 6).

Appellants state that claims 93-98 and are directed to beverages and that since the composition is patentable over the art that the beverages would be to. This is not seen due to the discussion of the art above.

All of the claimed components and particle sizes are clearly taught by the prior art. All of the components are used for their art recognized functions to obtain no more than expected results. 1) High intensity sweeteners are known, 2) bulking agents are known, 3) particle sizes are known. These ingredients are all known in products which simulate sugar.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer

exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

Helen Pratt

HELEN PRATT
PRIMARY EXAMINER

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

GREGORY MILLS
QUALITY ASSURANCE SPECIALIST

Hp 2-20-07